



Original operating instructions

Operating instructions CondorGrip Sheet Metal Clamp Type CGS



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1. Introduction

The CondorGrip sheet metal clamp type CGS is a load attachment for vertical, lowering, and turning (90°) of non-guided steel sheets, steel structures, and standard profiles.

Before you use the CondorGrip sheet metal clamp type CGS for the first time, read the operating instructions in their entirety. The operating instructions explain how to safely use, maintain, inspect, and dispose of the CondorGrip sheet metal clamp type CGS. These operating instructions are a component of the product and must be available to all users. Keep the operating instructions in a safe place for re-use. The CondorGrip sheet metal clamp type CGS is called the sheet metal clamp below.

1.1 Manufacturer/Service

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INFO

We will be happy to answer any questions you may have about your product.

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1.2 EU declaration of conformity

Content of the document:

For the product designated below

Name:	CondorGrip sheet metal clamp	
Type:	CGS	

we hereby declare that it corresponds to the **basic requirements** specified in the harmonization legislation named below:

DIRECTIVE 2006/42/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL of May 17, 2006 about machines and the change of Directive 95/16/EC (new version) – in short: **Machinery Directive**

Specification of the applicable harmonized standards that apply or details of the specifications for which conformity is declared:

Reference	Date of issue	Title		
Harmonized standards for the Machinery Directive:				
EN ISO 12100	2010-11	Safety of machines – General principles for		
+ Correction 1	2013-08	design – Risk assessment and risk reduction		
EN 13155	2022-03	Cranes – Safety – Non-fixed load lifting		
		attachments		
Additional applicable technical specifications (not published in the EU official gazette):				
DIN ISO/TR 14121-2	2013-02	Safety of machinery - Risk assessment - Part 2:		
DIN SPEC 33885		Practical guidance and examples of methods		

Authorized within the meaning of Annex II No. 1. A. No. 2, 2006/42/EC for the compilation of the technical documents:

Company	Carl Stahl Hebetechnik GmbH
Address	Tobelstr. 2
	D-73079 Suessen

Sole responsibility for issuing this declaration of conformity with regard to meeting the basic requirements and the preparation of the technical documents is borne by the manufacturer (or installation company):

Company	Carl Stahl Hebetechnik GmbH	
Address	Tobelstr. 2	
	D-73079 Suessen	

Declared by:

Last name, first name	Schwenger, Wolfgang
Title	Managing director

This declaration certifies conformity with the named harmonization legislation, however it does not promise properties.

Additional details:

This declaration applies to all copies that are manufactured according to the corresponding production drawings, which are a component of the technical documents. The attached accompanying documentation that supports the declaration of conformity contains additional details about adherence to above references.

The complete declaration of conformity is attached as a separate document.



2. Preparation of information

These operating instructions contain symbols, designations, instructions, and lists as depicted in Chapters 2.1 to 2.2.

2.1 Symbols and designations

Warnings

The warnings are classified and depicted as follows:



DANGER

A warning with the signal word "DANGER" indicates a hazard that can immediately and certainly cause death or severe, lasting injuries.



WARNING

A warning with the signal word "WARNING" indicates a hazard that may cause severe injuries or death.



CAUTION

A warning with the signal word "CAUTION" indicates a hazard that may cause minor to moderate injuries.

ATTENTION

A warning with the signal word "ATTENTION" indicates a hazard that may cause property damage.

In a **warning**, steps are marked with ▶ and structured chronologically.

Pictographs for specific hazards



Meaning:

Warning about suspended load.



Meaning:

Warning about danger of crushing.



Meaning:

Warning about hand injuries.

The pictographs are used in connection with the associated classification and the appropriate signal word.

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Useful information and tips



INFO

This symbol identifies useful information and tips.

Disposal



NOTICE ABOUT DISPOSAL

of packaging materials and load lifting devices.

2.2 Instructions and lists

All instructions are structured in chronological order and numbered sequentially, e.g.:

- 1. Step 1
- 2. Step 2

The result of an action is marked with an arrow:

> Result or device reaction

Instructions that do not have to be carried out in a particular sequence are marked as follows:

- Step
- Step

The result of an action is marked with an arrow:

> Result or device reaction

Lists are marked with dashes:

- List



3. Safety

Before you use the sheet metal clamp, carefully read the following safety instructions.

Chapters 3.1 to 3.3 list basic behavior rules that you must observe when handling the sheet metal clamp. You must absolutely follow the instructions that are marked with a ⚠ symbol to prevent danger to people. Warnings that belong to the individual instructions are always listed before the step in question.

3.1 Basic safety instructions

The sheet metal clamp has been constructed, tested, and left the company in a perfectly safe condition. In order to maintain this state, you must follow the instructions in these operating instructions.

- Read these operating instructions in their entirety;
- Heed the warnings and safety instructions;
- Make sure that these operating instructions are always available where the sheet metal clamp will be used;
- Make sure that only suitable specialized personnel performs work with and on the sheet metal clamp (see Tab. 1);
- During use, comply with the locally-applicable requirements for occupational safety and the work instructions of the operator;
- Consider the circumstances on-site;
- Observe the permissible angle of inclination (see Technical data in Chapter 4);
- Observe the maximum carrying capacity;
- Consider the additional tare weight of the sheet metal clamp:
- Tare weight sheet metal clamp + load weight = total weight ► Consider the weight of all components with regard to the maximum load capacity!
- Observe the permissible gripping range (see Technical data in Chapter 4);
- Use the sheet metal clamp only in connection with swivels on the crane hook;
- Damage that compromises safety must be repaired by an expert company;
- Perform all work with great care;
- Never open a sheet metal clamp when it is under load;
- Only use the sheet metal clamp if the typeplate is clearly legible;
- When using the sheet metal clamp in combination with a sling, heed the operating instructions for the sling;

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- Use only suitable slings, take special care that the load capacity of the sling fulfills the requirements;
- Make sure that your load chain is not twisted; use only slings with swivels;
- Consider the additional tare weight of the sling:
- Tare weight sheet metal clamp + tare weight sling + load weight = total weight ► Consider the total weight of all components with regard to the maximum load capacity!

Classification of the qualification areas for load lifting devices

Area of activity	Qualification	Professional knowledge
Delivery and transport	Dealer, mover	 Proof of training in load securing
		 Safe handling of load lifting devices
Storage	Storage specialist	 Safe handling of load lifting devices
Start-up, maintenance,	Specialized	 Expert: professional training and
and service	personnel	experience, sufficient knowledge in the
		area of load lifting devices
		 Safe handling of load lifting devices
		 Product-specific knowledge
Use, simple visual	Specialized	 Safe handling of load lifting devices,
inspection	personnel	professional training and experience
Disposal	Specialized personnel	 Knowledge of the regulations for proper disposal and re-use

Tab. 1: Overview

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3.2 Proper use

The following points comprise proper use:

- Vertical lifting, lowering, and turning (90°) of non-guided loads;
- Steel plates, steel structures, and standard profiles are approved for use;
- Observe the permissible load capacity: Tare weight of the individual components + load weight;
- Temperature range from -15 °C to + 80 °C;
- Per lifting procedure, only one component may be moved;
- The exact gripping range depends on the sheet metal clamp type (see table, Chapter 4);
- Use and storage only indoors;
- Even and symmetrical load distribution during vertical lifting and lowering of the load;
- Angle of inclination (clamping front and clamping side level) up to 90° in pulling direction;
- Exact angle of inclination (clamp front and clamp side level);
- Designed for a maximum of 16,000 load changes, depending on external conditions, the number of load change may decrease.

In addition to the points listed here, additional details must be taken from the technical data and observed (Chapter 4).

3.3 Improper use

The following points comprise improper use:

- Exceeding the maximum load capacity;
- More than one component per lifting or turning process;
- The maximum permissible surface hardness of 32 HRC of the load is exceeded (see Chapter 4);
- Use when the chain is twisted;
- Conveying pipes and components with diameters;
- Transporting fluids, molten material, hazardous materials, people and animals;
- Asymmetrical loading;
- Tearing away stuck loads, diagonal pulling, and pulling of loads on the floor, exception: the turning procedure, see Chapter 7.6;
- Exceeding the maximum angles of inclination (see table, Chapter 4);
- Changes to the construction;
- In environments that are subject to explosion, or where there is exposure to salt, acid, toxic, and/or alkaline substances;
- Use and storage outdoors.

Chapter 3.3 does not guarantee completeness. Anything that is not expressly permitted falls under improper use.

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4. Technical data

The following tables provide the specific technical data for the different sheet metal clamp types. Depending on the type, product properties vary substantially.

Note the data that applies to your specific sheet metal clamp type.

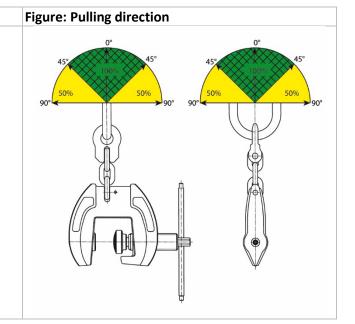
Name:	Sheet metal clamp	
Type:	CGS	
Model:	CGS 750kg; CGS 1500kg; CGS 3000kg	

General information	CGS 750kg	CGS 1500kg	CGS 3000kg
Load capacity	750 kg	1,500 kg	3,000 kg
Permissible gripping range	0 - 22 mm	0 - 32 mm	0 - 50 mm
Tare weight	2.8 kg	4.1 kg	7.0 kg
Maximum surface hardness of load	32 HRC	32 HRC	32 HRC
Temperature range for storage and use	-15 °C to 80 °C	-15 °C to 80 °C	-15 °C to 80 °C
Maximum number of load changes	16,000	16,000	16,000

Maximum permissible angle of inclination

Permissible pulling directions on clamp front level up to 45° at 100% of load capacity Starting at 45° at 50 % of load capacity

Permissible pulling directions on clamp side level up to 45° at 100% of load capacity Starting at 45° at 50 % of load capacity



Tab. 2: Technical data

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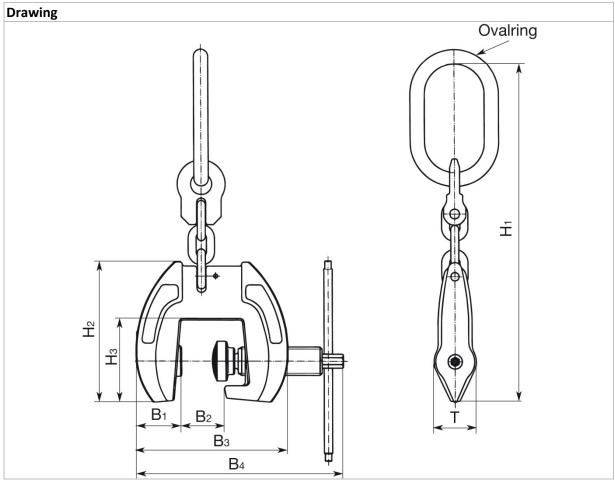


Fig. 1: Sheet metal clamp

Technical dimensions	CGS 750kg	CGS 1500kg	CGS 3000kg
	Oval ring	Oval ring	Oval ring
	LxWxD	LxWxD	LxWxD
	110x60x13	110x60x16	135x75x18
B1	42 mm	47.6 mm	56.5 mm
B2	22 mm	32 mm	50 mm
В3	125 mm	150 mm	185 mm
B4	180 mm	215 mm	275 mm
H1	300 mm	340 mm	420 mm
H2	112 mm	142 mm	172 mm
Н3	80 mm	90 mm	100 mm
Т	45 mm	45 mm	50 mm

Tab. 3: Technical data (continued)

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5. Delivery and transport

5.1 Scope of delivery

Check the delivery to ensure it is complete.

Pieces	Item	Item number depending on model/type
	Sheet metal clamp	Type CGS 750kg: 25301010015038 or;
1		Type CGS 1500kg: 25301010015039 or;
		Type CGS 3000kg: 25301010015040.
1	Original operating instructions	-
1	Declaration of conformity	-
1	Inspection document	-

Tab. 4: Scope of delivery

If parts are missing or damaged, contact the manufacturer/dealer (Chapter 1.1).

5.2 Transport

The sheet metal clamp is tested, checked and packed properly before delivery. Delivery is made using a suitable transport system.

Always transport the sheet metal clamp using a suitable transport system.

5.3 Storage

ATTENTION

Damage to device due to improper storage!

Improper storage can damage the sheet metal clamp.

- ▶ Store the sheet metal clamp in a suitable location.
- Store the sheet metal clamp in a clean, dry place indoors.
- Protect the sheet metal clamp against:
 - The effects of temperatures that fall below or exceed the permissible temperature range (see Chapter 4),
 - Humidity,
 - Soiling,
 - Damage,
 - Corrosion.

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6. Layout and function

The sheet metal clamp consists essentially of the following components:

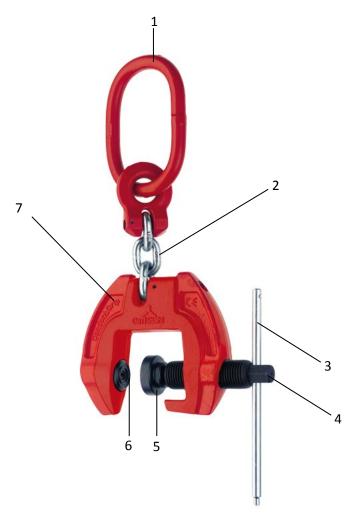


Fig. 2: Sheet metal clamp

Position	Name	Function
1	Oblong master link	Crane attachment
2	Chain	Connecting element
3	Pin	Force transfer and clamping effect
4	Screw	Force transfer and clamping effect
5	Cam	Force transmission and grip into the load
6	Pad	Force absorption and grip into the load
7	Body	Symmetrical load lifting

Tab. 5: Structure and function

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7. Use

7.1 Inspection before use

An inspection must be conducted before each use. You must conduct an inspection before first use (initial start-up), before each recurring use or after each servicing. For the precise details of the corresponding inspections, see the maintenance/inspection plan. Read Chapter 8, especially 8.3 - 8.5.

The inspection is intended to ensure that the sheet metal clamp is in perfect condition and ready for operation.

Before using the sheet metal clamp, you must observe the following with regard to the work environment:



DANGER

Danger to life due to falling load!

A falling load can cause severe injuries or death.

- ▶ Never linger under a suspended load.
- ► Never pass under a suspended load.
- ► Ensure there is sufficient free space to work.
- ▶ Ensure that there are no people in the working area.



WARNING

Danger of crushing due to lack of space!

There is a danger of crushing due to clearances that are too small at the load pick-up point, on the load transport path or at the load drop-off point.

- ► Inspect your work environment.
- ► Ensure there is sufficient space at the load pick-up point, on the load transport path, and at the load drop-off point.

7.2 Preparation of load and sheet metal clamp

Before you can use the sheet metal clamp, you must prepare the load and the sheet metal clamp as follows:

- 1. Prepare the load by removing
 - Oil,
 - Grease, and
 - Scale from the load.
- 2. Make sure that the spindle head and counter bearing of the sheet metal clamp are not dirty and there is no oil or grease on them.
- 3. Clean the spindle head and counter bearing with a clean cloth if necessary.

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7.3 Attaching the sheet metal clamp to the crane

In order to attach the sheet metal clamp stored in the storage system to the crane, proceed as follows:

- 1. Position the crane hook vertically over the sheet metal clamp.
- 2. Hook the crane hook into the oblong master link.
 - Crane hook safety snatch in.
- 3. Check the crane hook safety latch.
- 4. Lift the sheet metal clamp slowly and carefully.

7.4 Using a sling

If the sheet metal clamp is used in combination with a sling, the following points must be observed:

- Use slings only on the crane.
- Only use suitable slings with swivels.
- Heed the operating instructions for the slings.

7.5 Lifting, transporting, and lowering loads



DANGER

Danger to life due to reduced clamping power!

If a dirty load or spindle head and counter bearing are ignored, the clamping power is reduced, which may cause a load to fall.

- ▶ Check the weight of the load (see Tab. 2 Chapter 4 Technical data).
- ► Check the load, the spindle head and counter bearing for:
 - Soiling,
 - Scale,
 - Oil residues, and
 - Grease residues.
- Clean the load and/or spindle head and counter bearing if necessary (see Chapter 7.2).
- 1. Position the sheet metal clamp vertically over the load.
- 2. Open the sheet metal clamp using the spindle pin.
- 3. Position the load in the clamping jaw.
- 4. Use the spindle pin to close the sheet metal clamp, tighten by hand.
- 5. Check the clamping function and load distribution by lifting the load slightly and observing:
 - Visible chain tensioning,
 - Complete and flat resting of the load in the clamping jaw,
 - Symmetrical and even load distribution.
- 6. Lift the load slowly and carefully.
- 7. Transport the load to the desired load drop-off point.

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- 8. Lower the load slowly and carefully until the load stands or lies so that it will not tip.
- 9. Open the sheet metal clamp using the spindle pin.

7.6 Load turning (90°)

To turn loads, e.g. steel plates, steel structures, and standard profiles, you must observe the following in addition to Chapter 7.5:

1. Position the sheet metal clamp over the load.



WARNING

Risk of injury due to improper support!

Due to improper, unstable support, the load can tip when it is attached and during the turning process, and the load can slip.

- ► Ensure that the load rests on a tip-proof, support.
- ► If necessary, ensure stability.
- 2. Open the threaded spindle using the spindle pin.



DANGER

Danger to life due to swinging load!

If the permissible angle of inclination is not observed and the load is pulled upright in a jerky motion, the load may swing.

- ▶ Position the load centered, symmetrically balanced in the clamping jaw.
- ▶ Observe the permissible angle of inclination of 90° (see Fig. 2).
- ► Make sure that the load does not lose contact with the support during the turning process and that it slides slowly into the end position (see Fig. 2).
- 3. Position the load in the clamping jaw.
- 4. Close the threaded spindle using the spindle pin.
- 5. Pull the load upright by 90°, sliding slowly and carefully (see Fig. 2).



- 7. Lift the load slowly and place it carefully in the desired load drop-off point.
- 8. Lower the load by 90° slowly and carefully onto a suitable storage system until the load no longer slips and lies so that it cannot tip.

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8. Servicing

The sheet metal clamp must be cleaned, maintained, and inspected regularly. For the maintenance/inspection intervals, see the maintenance/inspection plan.

8.1 Cleaning

INFO



Regular cleaning and careful handling mean that the sheet metal clamp will be in good condition throughout its life cycle.

Component	Cleaning criteria	Actions
Oblong master link	The oblong master link must be movable, free of dust and dirt.	Clean
Chain	The chain must be movable, free of dust and dirt.	Clean
Screw	The screw must move easily, be free of dust and dirt.	Clean
Pin	The Pin must be free of dust and dirt.	Clean
Cam	The cam must be free of oil/grease, dust and dirt.	Clean and remove oil/grease
Pad	The pad must be free of oil/grease, dust and dirt.	Clean and remove oil/grease
Body	The body must be free of dust and dirt.	Clean
Typeplate	The typeplate must be free of dirt and legible.	Clean

Tab. 6: Cleaning

8.2 Inspection document

The inspection document serves as proof of the inspections conducted. Furthermore, all noted defects must be repaired and the proof thereof that is kept must be presented to the authorities if necessary. The original inspection document is attached as a separate document.

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8.3 Maintenance/inspection plan

Maintenance/inspection interval	Activity		
Before first use (initial start-up)	 Visual inspection and function check 		
Before each recurring use of the	 Visual inspection 		
sheet metal clamp without			
extraordinary events			
Annually	 Visual inspection, function check 		
Extraordinary inspection	 Depending on external conditions, the annual 		
	inspection cycle may be shortened. This includes		
	the following points:		
	 After damage events, servicing or special incidents, 		
	 Permanent use in shift operation, 		
	 Increased wear, 		
	 Corrosion, effects of heat due to environmental 		
	influences,		
	– etc.		

Tab. 7: Maintenance/inspection plan

8.4 Inspection criteria

The discard criteria for the sheet metal clamp are determined using the inspection criteria in the following table. For the basic value, specified in mm, see Technical data (see Chapter 4).

Component	Inspection criteria	Actions
Oblong master link	Any type of deformation and wear	Take out of service and contact manufacturer/service
Chain	Any type of deformation and wear	Take out of service and contact manufacturer/service
Screw	Any type of deformation and wear	Take out of service and contact manufacturer/service
Pin	Any type of deformation and wear	Take out of service and contact manufacturer/service
Cam	Any type of deformation and wear	Take out of service and contact manufacturer/service
Pad	Any type of deformation and wear	Take out of service and contact manufacturer/service
Body	Any type of deformation and wear	Take out of service and contact manufacturer/service
Typeplate	Legibility	Take out of service and contact manufacturer/service

Tab. 8: Inspection criteria

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8.5 Visual inspection and function check

Before each use, the sheet metal clamp must be checked and inspected. The tables in Chapter 8.4 list criteria which may indicate that you must take the sheet metal clamp out of service.



DANGER

Danger to life due to falling load!

Due to deformation and wear of the individual components, the load capacity may be reduced and the load can fall.

- ► Check the sheet metal lifting clamp for defects.
- ▶ Check to what extent the individual components are functional.
- ► Take the sheet metal lifting clamp out of service by marking it appropriately, if it is no longer functional and is beyond repair damaged (see Chapter 9.1).
- ▶ If necessary, contact the manufacturer/service (see Chapter 1.1).
- ▶ If necessary, dispose of the sheet metal lifting clamp (see Chapter 9.2).

Visual inspection

- 1. Check the sheet metal clamp for visual defects such as:
 - Cracks,
 - Deformation,
 - Wear,
 - Burr formation in the clamping jaw,
 - Expansion and lengthening of the chain links,
 - Incompleteness.
- 2. Take the sheet metal clamp out of service, if the sheet metal clamp has a defect (see Chapter 9.1).

Function check

- 1. Check all moving parts to ensure they move easily.
- 2. Check the functionality of the sheet metal clamp.
- 3. Take the sheet metal clamp out of service, if its function is compromised (see Chapter 9.1).

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9. Taking out of service and disposal

9.1 Taking out of service

- 1. Take the sheet metal clamp out of service by marking it.
- 2. Contact the manufacturer/service (see Chapter 1.1).
- 3. Dispose of the sheet metal clamp if necessary.

9.2 Disposal

Disposal of sheet metal clamp



NOTICE ABOUT DISPOSAL

If the sheet metal clamp can no longer be repaired or if it is no longer functional, it must be disposed of in accordance with the applicable legal provisions.

Disposal of packaging material

NOTICE ABOUT DISPOSAL



According to the Packaging Ordinance, the dealer must take back for re-use and/or ensure disposal of the packaging for its products that do not bear the symbol of a system for complete disposal.

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